

Renewable Energy System Cost Recovery Q&A

Q: Do I need to be connected to a power grid to be eligible for incentive payments?

A: Yes, you have to be a customer of the utility and the utility has to be serving the property where the renewable energy system is located. The property must be connected to the power grid, although the renewable energy system itself does not have to be connected.

Q: How big would a solar energy system need to be to generate enough electricity to qualify for the maximum annual incentive payment of \$2,000?

A: At a basic payment rate of 15 cents per kilowatt hour (kWh), a solar energy system would need to generate about 13,333 kWh per year to qualify for the maximum credit. The amount of power that needs to be generated would be much lower at higher rates of payment available to the owners of systems built with solar panels and inverters made in Washington.

Q: What sort of solar energy system would produce enough power to generate the maximum incentive payment?

A: At the 15 cent rate, you would need a system with a rating of 10 to 12.5 kWh to generate enough kilowatt hours to get the maximum \$2,000 annual tax credit. The size of the system could shrink to as little as 2,800 watts at the maximum 54 cent per kilowatt hour rate.

Q: About how much would such a system cost to install?

A: In general, using accepted cost factors in the solar energy installation industry, a commercially installed 10 kWh system would cost about \$9 to \$11 per watt, or about \$100,000. For the do-it-yourselfer, cost of materials alone is about \$7 to \$8 per watt. The cost would be proportionately lower for smaller capacity systems.

Q: How is the incentive program tiered to encourage use of materials manufactured in Washington State?

A: Incentive rates differ depending on whether key components of the energy system are manufactured here or out of state. The following chart provides some examples, based on solar systems that would generate enough power to recover the maximum payment of \$2,000 per year.

Components	Incentive rate	kWh to earn maximum \$2,000 credit	Approx. system size in kilowatts (Kw)	Estimated system cost
Out of state components	15 cents per kWh	13,333	10 Kw to 12.5 Kw	\$100,000-\$125,000
Inverter made in Washington	18 cents per kWh	11,111	8.5 – 10.5 Kw	\$85,000-\$100,000
Solar panels made in Washington	36 cents per kWh	5,555	4.3 – 5.2 Kw	\$43,000-\$52,000
Both inverter AND solar panels made in Washington	54 cents per kWh (18 + 36)	3,704	2.8 – 3.5 Kw	\$28,000-\$35,000

Q: Are there other renewable energy incentive programs?

A: Yes. They include:

- A federal income tax credit of 30 percent for one year (maximum \$2,000);
- An Avista Utilities production credit of 14 cents per kWh produced for one year (other utilities may offer similar incentives);
- Bonneville Environmental Foundation Green Tags for 5 cents per kWh for up to five years.

Q: Given these incentives, what would be the payback period for an installation that qualifies for the maximum 54 cents per kilowatt hour payment?

A: Washington's incentives would provide \$18,000 over nine years, at least half the estimated \$28,000 to \$35,000 cost of a solar system using inverters and panels made in Washington. The federal credit and potential utility incentives would further offset the investment. In addition, the amount a producer pays the utility for electricity would be reduced or eliminated.

Q: How many solar panels are needed to generate enough power for a typical home in a year?

A: Where you live, installation details, and other factors determine the number of panels you need. Generally speaking, a fixed residential installation in Eastern Washington would use about 50 200-watt panels. In areas with less sunshine such as Puget Sound, you would need 15 percent more panels to produce the same amount of power. The typical home uses about 8,000 kWh per year.

Q: What about the incentives for wind power?

A: Producers of wind power are eligible for incentive payments of 18 cents per kilowatt hour if their inverter was manufactured in Washington, and another 15 cents per kilowatt hour if the windmill blades were manufactured in Washington, for a total of 33 cents per kilowatt hour. Wind generation systems made from out-of-state components are eligible for 12 cents per kilowatt hour.